

**Notice of Allowability**

Application No.

09/700,140

Examiner

Jason T. Whipkey

Applicant(s)

KONDO ET AL.

Art Unit

2622

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Request for Continued Examination filed 4 September 2007.
2. ☒ The allowed claim(s) is/are 1 and 3-14 (now renumbered 1, 2, 4-13 and 3, respectively).
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_



LIN YE  
SUPERVISORY PATENT EXAMINER

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes be unacceptable to Applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Paul Levy on September 14, 2007.

2. The application has been amended as follows:

Replace all claims with the following:

1. (Currently Amended) A picture providing apparatus adapted to input distorted picture image in which a predetermined range is collectively imaged from an image pick-up unit to provide the entirety or a portion of the picture image in accordance with request of a picture image display unit, the apparatus including:

a communication unit configured to receive a request for transmission of picture image from the picture image display unit and ~~for transmitting to transmit~~ the entirety or the portion of the picture image from which distortion has been eliminated to the picture image display unit;

a memory unit configured to store the picture image inputted from the image pick-up unit;

selector unit configured to select the entirety or the portion of the picture image stored in the memory unit in correspondence with the request that the communication unit has received; and

picture image conversion unit configured to both eliminate distortion of the selected entirety or the portion of the picture image and convert the selected entirety or portion into high quality picture image with increased resolution in a single step,

wherein the picture image conversion unit eliminates distortion of the entirety or a portion of the picture image selected by the selector unit and converts such picture image into high quality picture image with increased resolution by an adaptive processing in a classification adaptive processing.

2. (Canceled)

3. (Currently Amended)                      The picture providing apparatus as set forth in claim [[2]] 1, wherein the picture image conversion unit reduces a number of bits of pixel value of pixels of a block or blocks for classification by ADRC processing.

4. (Currently Amended)                      A picture providing method for a picture providing apparatus adapted to input distorted picture image in which a predetermined range is collectively imaged from an image pick-up unit to provide the entirety or a portion of the picture image in accordance with request of a picture display unit, the method including:

a communication step of receiving request for transmission of picture image from the picture image display unit and of transmitting the entirety or the portion of the picture image from which distortion is eliminated;

a memory step of storing the picture image inputted from the image pick-up unit;  
a selection step of selecting the entirety or the portion of the picture image stored at the memory step in correspondence with the request received at the communication step; and  
a picture image conversion step ~~for~~ of both eliminating distortion of the selected entirety or the portion of the picture image and ~~for~~ of converting the selected entirety or portion into high quality picture image with increased resolution in a single step,

wherein the picture image conversion ~~unit~~ step eliminates distortion of the entirety or a portion of the picture image selected by the ~~selector unit~~ selection step and converts such picture image into high quality picture image with increased resolution by an adaptive processing in a classification adaptive processing.

5. (Currently Amended)                      A computer-readable medium having recorded thereon a program that, when executed on a computer, causes the computer to perform the method comprising:

a communication step of inputting distorted picture image in which a predetermined range is collectively imaged from an image pick-up unit to receive request for transmission of picture image from a picture image display unit to a picture providing unit for providing an entirety or a portion of the picture image in accordance with request of the picture image display unit, and of transmitting the entirety or the portion of the picture image from which distortion is removed to the picture image display unit;

a memory step of storing the picture image inputted from the image pick-up unit;  
a selection step of selecting the entirety or the portion of the picture image stored at the memory step in correspondence with the request received at the communication step; and

a picture image conversion step ~~for~~ of both eliminating distortion of the selected entirety or the portion of the picture image and ~~for~~ of converting the selected entirety or portion into high quality picture image with increased resolution in a single step,

wherein the picture image conversion ~~unit~~ step eliminates distortion of the entirety or a portion of the picture image selected by the ~~selector unit~~ selection step and converts such picture image into high quality picture image with increased resolution by an adaptive processing in a classification adaptive processing.

6. (Currently Amended) A picture processing apparatus comprising:

an extraction unit configured to extract a feature quantity every predetermined unit of picture data having distortion;

a classification unit configured to carry out classification on every predetermined unit of the picture data in accordance with the feature quantity extracted by the extraction unit; and

a picture image conversion unit configured to both correct the distortion of the picture data in accordance with result of the classification and to convert the picture data into high quality picture image with increased resolution in a single step,

wherein the picture image conversion unit eliminates distortion of the entirety or a portion of the picture image ~~selected by the selector unit~~ and converts such picture image into high quality picture image with increased resolution by an adaptive processing in a classification adaptive processing.

7. (Previously Presented) The picture processing apparatus as set forth in claim 6, which further comprises an image pick-up unit configured to image the picture data having distortion.

8. (Previously Presented) The picture processing apparatus as set forth in claim 6, wherein the picture image conversion unit eliminates distortion of the picture image having distortion by classification adaptive processing and converts it into high quality picture image.

9. (Currently Amended) The picture processing apparatus as set forth in claim 6, wherein the classification unit reduces the number of bits of pixel value of pixels of a block for classification by the ADRC processing.

10. (Currently Amended) A picture processing method including:  
an extraction step of extracting feature quantity every predetermined unit of picture data having distortion;  
a classification step of carrying out classification every predetermined unit of the picture data in accordance with feature quantity extracted by the extraction step; and  
a picture image conversion step of both correcting the distortion of the picture data in accordance with result of the classification and ~~for~~ of converting the picture data into high quality picture image with increased resolution in a single step,

wherein the picture image conversion-unit step eliminates distortion of the entirety or a portion of the picture image ~~selected by the selector unit~~ and converts such picture image into high quality picture image with increased resolution by an adaptive processing in a classification adaptive processing.

11. (Currently Amended) A computer-readable medium having recorded thereon a program that, when executed on a computer, causes the computer to perform the method comprising:

an extraction step of extracting feature quantity every predetermined unit of picture data having distortion;

a classification step of carrying out classification every predetermined unit of the picture data in accordance with the feature quantity extracted by the extraction step; and

a picture image conversion step of both correcting the distortion of the picture data in accordance with result of the classification step and ~~for~~ of converting the picture data into high quality picture image with increased resolution in a single step,

wherein the picture image conversion-unit step eliminates distortion of the entirety or a portion of the picture image ~~selected by the selector unit~~ and converts such picture image into high quality picture image with increased resolution by an adaptive processing in a classification adaptive processing.

12. (Currently Amended) A picture providing system comprising an image pick-up unit, a picture providing unit, and a picture display unit,

wherein the image pick-up unit includes image pick-up unit configured to collectively image picture image of a predetermined range,

wherein the picture providing unit includes:

a first communication unit configured to receive a request for transmission of picture image from the picture display unit and ~~for transmitting to transmit~~, to the picture display unit, the entirety or a portion of the picture image from which distortion has been eliminated so that there is provided high quality picture image;

a memory unit configured to store the picture image inputted from the image pick-up unit;

a selector unit configured to select the entirety or a portion of the picture image that the memory unit stores in correspondence with the request that the first communication unit has received; ~~and~~

a classification unit configured to carry out classification on every predetermined unit of the picture data; and

a picture image conversion unit configured to both correct the distortion of the picture data in accordance with result of the classification and to convert the picture data into high quality picture image with increased resolution in a single step,

wherein the picture image conversion unit eliminates distortion of the entirety or a portion of the picture image selected by the selector unit and converts such picture image into high quality picture image with increased resolution by an adaptive processing in a classification adaptive processing,



wherein the picture display unit includes:

second communication unit configured to transmit a request for transmission of the picture image to the picture providing unit ~~and for receiving to receive~~, from the picture providing unit, the entirety or a portion of the picture image from which distortion is eliminated so that there is provided high quality picture image.

13. (Currently Amended) A picture providing system comprising an image pick-up unit, a picture providing unit and a picture processing unit,
- wherein the image pick-up unit includes
- an image pick-up unit configured to collectively image picture image of a predetermined range,
- wherein the picture providing unit includes:
- a first communication unit configured to receive a request for transmission of picture image from the picture processing unit ~~and for transmitting to transmit~~ the entirety or a portion of the picture image to the picture processing unit;
- a memory unit configured to store the picture image inputted from the image pick-up unit; and
- a selector unit configured to select the entirety or a portion of the picture image that the memory unit stores in correspondence with the request that the first communication unit has received, and

wherein the picture processing unit includes:

a second communication unit configured to transmit a request for transmission of the picture image to the picture providing unit and ~~for receiving to receive~~ the entirety or a portion of the picture image from the providing unit; and

a picture image conversion unit configured to carry out both conversion into ~~the~~ a high quality picture image and converting the picture image into high quality picture image with increased resolution in a single step,

wherein the picture image conversion unit eliminates distortion of the entirety or a portion of the picture image selected by the selector unit and converts such picture image into high quality picture image with increased resolution by an adaptive processing in a classification adaptive processing.

14. (Previously Presented) The picture providing apparatus as set forth in claim 1, wherein the high quality picture image has a resolution higher than that before the converting.

### *Conclusion*

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Whipkey, whose telephone number is (571) 272-7321. The examiner can normally be reached Monday through Friday from 9:00 A.M. to 5:30 P.M. eastern daylight time.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye, can be reached at (571) 272-7372. The fax phone number for the organization where this application is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JTW

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September 25, 2007



LIN YE  
SUPERVISORY PATENT EXAMINER